

Application Serial No. 10/021,747
Response dated June 15, 2004
Response to Office Action of February 24, 2004

REMARKS

This response is being filed in response to an Office Action dated February 24, 2004 ("the Office Action"). Claims 1, 2 and 4-7 are pending in this application, stand rejected, and have been maintained unchanged. Applicant respectfully requests reconsideration of the present application in light of the following remarks.

The June 15, 2004 Interview

Applicants would like to take this opportunity to thank Examiner Dicus and Supervisory Examiner Kelly for the courtesies extended to their representative during the June 15, 2004 interview. During the interview, Applicants' representative and the Examiners discussed U.S. Patent No. 5,489,466 to Inaba et al. ("Inaba"), U.S. Patent No. 5,747,157 to Hashimoto et al. ("Hashimoto") and U.S. Patent No. 6,607,806 to Kato et al. ("Kato"). Applicants' representative and the Examiners came to an agreement that the rejection of the pending claims over Inaba, Hashimoto and Kato would be withdrawn. This indication is noted with appreciation.

The Rejections Under 35 U.S.C. § 103

Claims 1, 2, and 4-7 were rejected under 35 U.S.C. § 103(a) in the Office Action as being obvious over Inaba and Hashimoto in view of Kato.

During the interview, Applicants respectfully asserted that neither Inaba nor Hashimoto, taken alone or in view of Kato, teach or suggest the invention. With regard to Inaba, the Examiner asserted in the Office Action that Inaba are allegedly made of the same material, and therefore, that they are functional equivalents. With regard to Hashimoto, the Examiner alleged that Hashimoto teaches a magnetic recording medium that removes dust and fluff accumulation. The Examiner then asserted that Kato teaches the number, height, and distribution of protrusions,

Application Serial No. 10/021,747
Response dated June 15, 2004
Response to Office Action of February 24, 2004

which are lacking in Inaba and Hashimoto, and that it would have been obvious to one of ordinary skill in the art to modify the magnetic recording medium of Inaba and/or Hashimoto to provide a cleaning property. Applicants respectfully traversed these assertions.

Applicants respectfully asserted that Inaba and Hashimoto are fundamentally different from the invention. Neither Inaba nor Hashimoto teaches a cleaning medium, with surface protrusions, which will clean a magnetic head, as does the present invention. Both Inaba and Hashimoto are directed to magnetic recording media, and their objectives include surface smoothness, which are in contrast to the objectives of the invention. Therefore, Inaba and Hashimoto do not teach or suggest the invention or its objectives and are fundamentally different from the invention. Accordingly, it would not have been obvious to someone skilled in the art to modify the teachings of Inaba or Hashimoto to obtain the invention and its results.

There are meaningful differences between a cleaning layer and the surface of the Inaba and Hashimoto recording tapes. As claimed, the cleaning layer has protrusions on the surface. Inaba and Hashimoto lack these protrusions. Moreover, as the references are concerned with smooth continuous and uniform contact with the head for proper recording and playback, there would be no reason to add the claimed protrusions to the surface of the tape, and thus, teach away from adding such protrusions.

Furthermore, Inaba and Hashimoto fail to teach or suggest the necessary cleaning elements of the invention. Namely, both Inaba and Hashimoto do not teach a cleaning layer that has "5 to 80 protrusions having a height of from 35 to 100 nm per 900 μm^2 ". The presence of 5 to 80 protrusions of the specified height and distribution helps achieve an appropriate cleaning performance to an MR head, which Inaba and Hashimoto fail to teach or suggest. Instead, both

Application Serial No. 10/021,747
Response dated June 15, 2004
Response to Office Action of February 24, 2004

Inaba and Hashimoto disclose that excellent smoothness of the surface is desirable, and therefore teach away from the presence of protrusions on the surface of the medium.

Because of the fundamentally different nature of the magnetic recording medium of Inaba and Hashimoto from the invention, it would not have been obvious to one skilled in the art to modify the teachings of Inaba or Hashimoto to provide the protrusions of the invention in order to obtain the desired cleaning performance with reduced head abrasion.

Regarding Hashimoto, the Examiner asserted in the Office Action that Hashimoto teaches a magnetic recording medium that removes dust and fluff accumulation. However, Applicants respectfully assert that Hashimoto does not teach a magnetic recording medium that removes dust and fluff. First, Hashimoto fails to teach the specified protrusions having the specified distribution, and the incorporation of an aliphatic acid amide, aliphatic acid and aliphatic acid ester. Hashimoto does not describe a medium suitable for removing dust and fluff. Second, Hashimoto does not describe that the magnetic recording medium removes dust and fluff accumulation as the Examiner asserted is taught in column 16, lines 36-68 and Table 2. Rather, the cited portions merely appear to indicate that dust and fluff does not accumulate. The observations were limited to "acceptable", which meant "no dust and fluff were observed" and "unacceptable", which meant "dust and fluff were visually observed". Hashimoto does not teach removing dust and fluff, but a magnetic recording medium that does not produce visible dust and fluff accumulation. Accordingly, it would not have been obvious to someone skilled in the art to modify the teachings of Hashimoto to obtain a cleaning medium as provided in the invention.

Regarding Kato, Applicants respectfully assert that, similar to Inaba and Hashimoto, Kato is fundamentally different from the invention and has objectives that would make it improbable

Application Serial No. 10/021,747
Response dated June 15, 2004
Response to Office Action of February 24, 2004

for someone skilled in the art to modify Kato's teachings to obtain either the invention or the results obtained by the invention. Kato is directed to a magnetic recording medium having excellent still durability and head staining characteristics, and not to obtaining a cleaning medium that has high cleaning power for a magnetic head, does not scratch a magnetic head, and minimizes head abrasion. Furthermore, Kato fails to teach or suggest providing the specified number and height of the protrusions for the purpose of engaging the recording head for cleaning or that in order to achieve the appropriate cleaning performance for an MR head. Rather, Kato is directed to a magnetic recording medium in which smoothness is desirable, and any protrusions are minimized to maintain smoothness (col. 10, lines 48-56). Therefore Kato is fundamentally different from the invention and it would not have been obvious to someone skilled in the art to modify Kato's teachings to produce the invention and to obtain its results.

All of the references, Inaba, Hashimoto and Kato, are directed to optimizing the performance of a magnetic recording medium, and therefore teach away from the invention.

Accordingly, Inaba and Hashimoto taken in light of each other and/or Kato fail to teach all the elements of the invention. None of these references teach providing the specified protrusions on the surface of a cleaning medium, more specifically, the specified protrusions in order to achieve the appropriate cleaning performance.

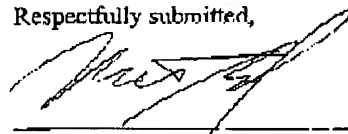
For all the foregoing reasons, favorable reconsideration and withdrawal of this rejection are respectfully requested.

Application Serial No. 10/021,747
Response dated June 15, 2004
Response to Office Action of February 24, 2004

Applicants respectfully submit that all outstanding rejections have been addressed and are now either overcome or moot. Applicants further submit that all claims pending in this application are patentable over the prior art. Favorable reconsideration and withdrawal of those rejections and objections is respectfully requested.

Favorable consideration and prompt allowance of this application is respectfully requested. In the event that there are any questions, or should additional information be required, please do not hesitate to contact Applicants' attorney at the number listed below.

Respectfully submitted,



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